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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,182	01/16/2004	Masahiro Yamada	SON-2084/DIV2	5608

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EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,182

Applicant(s)

YAMADA ET AL.

Examiner

Jordan M. Schwartz

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 52-70 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 52-70 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 09/842,021.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/16/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/842,021, filed on April 26, 2001.

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

Claims 52, 58 and 63 (and dependent claims 53-57, 59-62, 64-70) are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the optical portion closely contacting a portion of the convex curved face of the convex lens (which is the assumed meaning for purposes of examination), does not reasonably provide enablement for the optical portion closely contacting the convex curved face of the convex lens (i.e. implying that it contacts the entirety of the convex curved face). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Specifically, claiming that the optical portion closely contacts the convex curved face implies that it is contacting the entirety of the face, however, this cannot occur due to the hole and due to part of the convex curved face being

Art Unit: 2873

exposed in the hole. The same rejection applies to that part of the claims claiming the concave curved face closely contacting the convex curved face and again the assumed meaning is the concave curved face closely contacting said portion of the convex curved face and it is suggested that these claims be amended as per the assumed meaning above to overcome this rejection.

Claims 53 and 59 (and dependent claims 54-57 and 60-70) are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "the convex curved face facing away from this flat surface (which is the assumed meaning for purposes of examination), does not reasonably provide enablement for "the convex curved face facing this flat surface. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Specifically, in all of the embodiments, the convex surface is opposite or facing away from the surrounding flat surface and not facing towards the surrounding flat surface as claimed.

Claim 69 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "a flat surface of the first convex lens and the fourth face of the third optical portion are bonded" (which is the assumed meaning for purposes of examination), does not reasonably provide enablement for "the first face of the first optical portion and fourth face of the third optical portion are bonded". The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Specifically, in all of the

Art Unit: 2873

embodiments having the two claimed portions bonded together, the convex lens is surrounded by a flat surface, one face of which is bonded to the first optical portion and the second face of which is bonded to the third optical portion. Therefore, faces of the optical portions are not disclosed as being bonded to each other.

Claim 55 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In reference to claim 55, that part of the claim stated "wherein the area around the concave curved face...located in an identical or substantially identical plane" renders the claim vague and indefinite because it is not clear as to what plane it is identical or substantially identical to. For purposes of examination, similar to claim 61, the assumed meaning is "wherein the area around the concave curved face in the first face of the first optical portion is flat or substantially flat and located in an identical plane or substantially identical plane to the flat surface of the first convex lens."

Claim Objections

Claims 57 and 68 are objected to for the following reasons. Since the intended meaning could be determined from the specification and the Figures, 112 rejections were not made but instead these lack of clarity issues are being raised in the following claim objections.

With respect to claims 57 and 68, that part of the claim stating "can be made from titanium oxide, tantalum oxide..." creates the lack of clarity because it

Art Unit: 2873

is not clear if applicant is claiming that it can be made from one of these claimed materials or if the device includes all of the claimed materials. From what is set forth in the specification the assumed meaning is from one of these claimed materials and it is suggested that applicant claim "wherein the material of the convex lens can be made from one of titanium oxide, tantalum oxide, ..." or similar language to provide the necessary clarity.

In further reference to claim 68, the "and/or" creates a lack of clarity and it is suggested that it be changed to "wherein the material of the first convex lens, the second convex lens, or both, is made from one of titanium oxide, tantalum oxide..."

Claim 59 is objected to because of the following informality: in line 3, "the flat surface" should be changed to "a flat surface" since the flat surface lacks an antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 2873

Claims 52-56 are rejected under 35 U.S.C. 102(e) as being anticipated by Harada patent number 6,392,819.

Harada reads on these claims by disclosing the limitations therein including the following: an optical device (abstract) comprising a convex lens formed with a convex curved face (Figure 1, column 5, line 43, re lens "11"); a first portion closely contacting a portion of the convex curved face of the convex lens (Figure 1 re "13" as the first portion). The "first portion" of Harada can inherently be considered as an "optical" portion since it is part of an optical system i.e. the holder of the lens, since it is part of an optical system, can inherently be considered as an "optical portion". Harada further discloses the first optical portion having a first face (Figure 1, the face of "13" closest to the top of the page) and a second face (Figure 1, the face of "13" closest to the bottom of the page); a concave curved face closely contacting a portion of the convex curved face being formed in the first face (Figure 1 and column 5, line 67 to column 6, line 6, the concave portion of "13" in contact with lens "11" as the "concave curved face"); a hole communicating with the second face formed from a deep side of the concave curved face (Figure 1, the hole within portion "13" formed from the deep side of the concave face in communication with the bottom surface of "13" i.e. the "second face"); a part of the convex curved face of the convex lens exposed in the hole of the first optical portion (Figure 1). It is believed that the convex lens and hole of Harada are both at least substantially rotationally symmetric, this being reasonably based upon what is disclosed in Figure 1. Harada further discloses the convex lens surrounded by a flat surface

Art Unit: 2873

(Figure 1, a small notched out portion of the lens "11" forming a flat surface that surrounds the convex lens); an extension of the optical axis of the convex lens passing through the hole (Figure 1); the area around the concave curved face as substantially flat and substantially parallel to the flat surface of the convex lens (Figure 1, with the uppermost surface of "13" i.e. the first face as the "flat area around the concave curved face" and it is disclosed as substantially parallel to the notched flat surface of lens "11"); this claimed flat area around the concave curved face in a "substantially" identical plane to the flat surface of the first convex lens (Figure 1); the rotational symmetric axis of the hole and of the convex lens as substantially coinciding (Figure 1) and the concave curved face forming an annular inclined face (Figure 1 re the concave curved face of "13").

Claim 52 is rejected under 35 U.S.C. 102(b) as being anticipated by Stewart et al patent number 4,304,461.

Stewart et al reads on these claims by disclosing the limitations therein including the following: an optical device (abstract) comprising a convex lens formed with a convex curved face (Figure 3, column 2, lines 54-58, re lens "10"); a first portion closely contacting a portion of the convex curved face of the convex lens (Figure 3, column 2, lines 10-60, re "6" as the first portion). The "first portion" of Stewart et al can inherently be considered as an "optical" portion since it is part of an optical system i.e. the ferrule ("6") of the optical connector, since it is part of an optical system, can inherently be considered as an "optical portion". Regardless, Stewart discloses that the ferrule can be made from a precision jewel or synthetic sapphire (column 2, lines 10-18 which, as a jewel or sapphire,

Art Unit: 2873

would inherently have optical properties. Stewart et al further discloses the first optical portion having a first face (Figure 3, the face of "6" closest to the right side) and a second face (Figure 3, the face of "6" closest to the left side); a concave curved face closely contacting a portion of the convex curved face being formed in the first face (Figure 3, column 2, lines 25-29); a hole communicating with the second face formed from a deep side of the concave curved face (Figure 3, column 2, line 18, the hole within portion "6" formed from the deep side of the concave face in communication with the "second face"); a part of the convex curved face of the convex lens exposed in the hole of the first optical portion (Figure 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harada patent number 6,392,819 in view of Nomura et al patent number 6,342,976.

Harada discloses as is set forth above including the device as an objective lens for use in an optical pickup device (column 1, lines 6-12) but does not disclose the material of the device. Nomura et al teaches that an objective lens for use in an optical pickup device (column 1, lines 13-36, column 3, lines 4-18),

Art Unit: 2873

that it is desirable that the material of the objective lens can be made from titanium oxide for the purpose of providing an optical pickup of improved performance and decreased cost (claim 5, column 1, line 13 to column 2, line 38). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the material of the objective lens of Harada as including titanium oxide since Nomura et al teaches that an objective lens for use in an optical pickup device, that it is desirable that the material of the objective lens can include titanium oxide for the purpose of providing an optical pickup of improved performance and decreased cost.

Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al patent number 4,304,461.

In reference to this claim, Stewart et al discloses as is set forth above including that the optical system can comprise two such optical devices and further discloses the two optical devices in contact with each other with optical axes substantially coinciding (Figure 1, column 1, lines 45-50 and column 2, lines 61-66), but discloses the optical devices attached by "mating means (column 1, lines 45-50 and column 2, lines 61-66) and not by "bonding" as claimed. However, it is well known in the art of optical devices that optical components can be attached by bonding for the purpose of providing a more secure and lasting attaching means. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the optical devices of Stewart et al as attached by bonding since it is well known in the art of

Art Unit: 2873

optical devices that optical components can be attached by bonding for the purpose of providing a more secure and lasting attaching means.

Allowable Subject Matter

Claims 59-70 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with reference to claims 59-70, none of the prior art either alone or in combination, disclose or teach of the claimed optical system having the first and second optical devices as claimed being bonded so that the optical axes of the claimed first and second convex lenses substantially coincide, and specifically including, as the distinguishing feature in combination with the other limitations, the claimed first convex lens surrounded by a flat surface and the convex curved face facing away from this flat surface.

Examiner's Comments

Mimmack et al patent number 5,052,800 and Roberts et al patent number 3,772,516 are being cited to show optical devices having some similar structure to that of the claimed invention.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number

Art Unit: 2873

is (571) 272-2337. The examiner can normally be reached on Monday to Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jordan M. Schwartz
Primary Examiner
Art Unit 2873
September 29, 2004